

A DANGEROUS ATTRACTION

An unusual package attracts trouble for a young pilot trying to make his way in remote Central Australia. Name withheld



Photo courtesy of the author

Compass carry on: Even seemingly innocuous objects like clipboards and books with metal binders (like the old VFG), can create problems if they are left near the compass.

I had just completed my first week as a charter pilot based in Alice Springs. With no experience in the Northern Territory, or anywhere else for that matter, the company had given me the tourist routes to help me settle in to the job.

Undoubtedly keen to vindicate my appointment, the chief pilot assigned my name to the operations board for a return charter between Alice Springs and Bing Bong Homestead, a decent round trip of some 1000 nm. This was typical of their operations and I hoped it would consolidate my rapidly growing confidence.

I thought I would do a little homework the weekend before I left, about the various aspects of the trip. I was acutely aware that my new employer would be keeping a sharp interest in how I managed. I picked out some major landmarks on the map and noted that our first refuelling stop, Brunette Downs, would be conspicuous for its proximity to a large saltpan. The destination on the coast of the Gulf of Carpentaria was signposted by a nearby island.

It was an early morning departure and I submitted a VFR plan for a C182 with full fuel and mandatory water. My two

passengers were bulldozer mechanics, regular company clients. They were not carrying much overnight baggage but they did have a very solid tool box which was inspected, weighed and securely located on the floor between the front and rear seats.

We departed in ideal weather conditions and soon reached our cruising altitude where we were greeted by a magnificent view of the rugged desert landscape softly illuminated by the morning sun.

I was able to get several position fixes and was pleased to see that my track and groundspeed calculations were right on the money every time. The fine conditions permeated the mood in the cabin with light-hearted banter flowing freely between the three of us.

Position fix: Approaching the Barkley Tablelands the sparsity of ground features made it increasingly difficult to get an accurate position fix. I reassured myself that all I had to do was hold an accurate heading and we'd fly right over Brunette Downs – after all I had already confirmed my track and groundspeed.

The rear passengers were now fully relaxed. Spread out with one leg on the toolbox one of them asked if he

could place his briefcase up front. “Sure,” I answered making room for the bag between the seats.

Not long after, I noticed that I had wandered off heading. I corrected it, reminded myself of the importance of staying on track, and radioed Tennant Creek to let them know we were commencing our descent to Brunette Downs.

One of the passengers asked me to point out the homestead. “Straight ahead,” I said, although I couldn't quite make it out yet. I knew it would be difficult to spot a small tin shed from this distance but it bothered me that I couldn't see the salt lake.

Maybe vegetation had covered it since it was mapped? Or perhaps the angle of the sun was playing tricks with my eyes?

I reached circuit height and my estimated time of arrival came and went – still with no sign of Brunette Downs.

“Where's the airport mate?” asked one of the passengers, his tone now sounding a little concerned. I ignored the question and rechecked the logic of the flight plan and the map. The airport had just vanished!

I had plenty of fuel and an escape plan. If things got really bad I could simply fly due west until I found the Stuart High-

way then south back to Tennant Creek. But when would I have to commit to the escape plan? I calculated I had around 40 minutes at the most before decision time if I continued on my current heading.

Just then the HF radio barked to life with Tennant Creek flight information service wanting to know my full SAR position. I paused then answered, "Conducting survey Brunette Downs area". I was buying time. By now the passengers were visibly annoyed.

I had no idea how I had got myself into this mess.

Almost 35 minutes after our ETA, a stroke of luck allowed me to fix my position over Eva Downs homestead – 70 nm off track! I relayed my position and intentions to Tennant Creek. This was not going to go down well back in the office.

Drift: Beneath me there were myriad dirt roads heading off in every direction. I swung the aircraft onto the direct track to Brunette Downs, but it just didn't look right; nothing seemed to make sense.

Then after looking at the map and scanning the ground thoroughly I found a small dry creek bed that arched most of the way back to Brunette Downs.

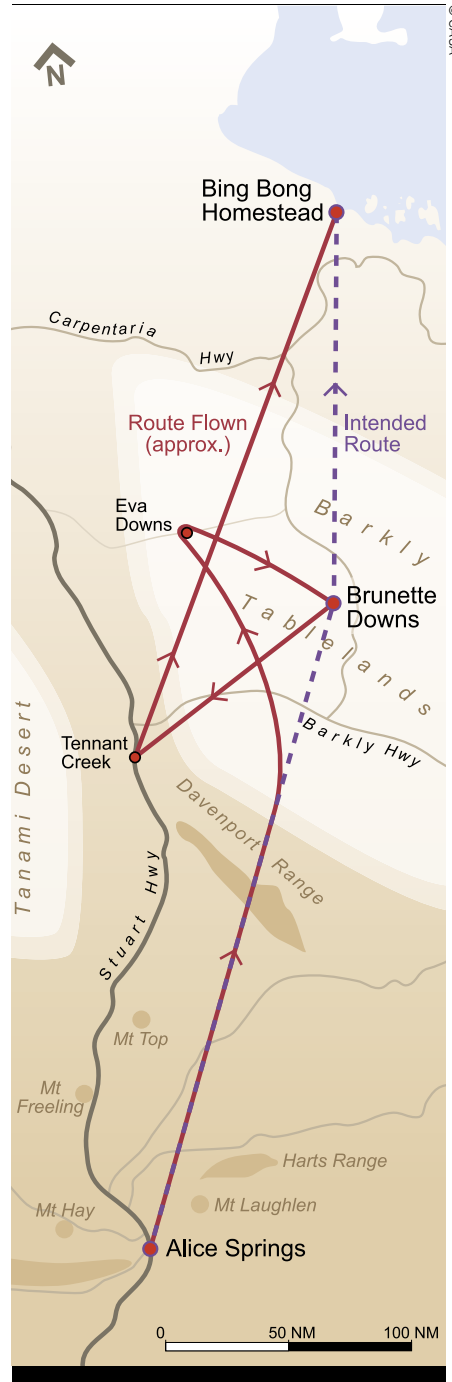
Following it seemed to be my best option. Fortunately it led me all the way to the aerodrome where I made a safe landing. (You couldn't miss the huge saltpan sitting contemptuously next to the homestead exactly as marked on the map!)

As I waited for the refueller I tried to work out what had gone wrong. Without any noticeable wind change, I had somehow managed to drift a considerable distance left of track.

I had then descended to a position and altitude where there was little chance of seeing the destination airstrip. The only explanation I could see pointed singularly to my own inadequacies.

Our refueller arrived and told us that his truck had broken down. We would have to continue to Tennant Creek for fuel.

With palms now sweating profusely I departed Brunette Downs. Checking to see that my departure track was correctly orientated with the prominent salt lake, I was astonished to see that it was not. We were not heading for Tennant Creek at all!



The route flown by the author in Central Australia

My aviation career was beginning to disintegrate before my eyes. The passengers again sensed that something was wrong and the atmosphere in the cabin became decidedly tense. I concluded there was a serious problem – and I was sure that it wasn't me. Glaring at the compass revealed no bubbles within the glass, no physical damage, nothing amiss at all.

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Desperately trying to recall everything I knew, I turned to my passengers and tentatively asked, "Do you by any chance have a magnet on board?"

To my amazement the front passenger, with a rapid arching arm movement, proudly extracted a powerful magnet from his office briefcase. This stout piece of iron bar, he explained, was used for retrieving tools that had been dropped in large bore engines. I felt an overwhelming sense of relief to have located the source of the problem.

Initially the briefcase had been located on the rear passenger seat. At a critical point just when navigation features became sparse it was moved forward between the front seats directly influencing the aircraft's compass.

On arrival at Tennant Creek I removed the magnet and checked the compass. The charter then resumed without further incident.

As many others in my occupation can attest, Murphy has a way of delivering at the most inopportune times. Attempting to come up with clever solutions in the middle of a high-workload crisis is best left to movie scriptwriters. In this case, I had a realistic escape plan and I had every intention to implement it.

The incident has taught me the value of asking for assistance if you get into trouble. If I'd confessed the problem to flight service, I'm sure they could have got me back on track faster.

– Overleaf for analysis

\$1000

Awarded for best entry

ANALYSIS

MAGNETS COME IN MANY GUISES

Staff writers

If you're "going bush" in pursuit of career advancement there's a lot of accumulated wisdom to draw on, and everybody wants to help, mainly because it's in the spirit of bush flying to share experiences. This pilot's story is a good example of how first-job CPLs can benefit from the experience of others who've found themselves in similar situations.

Bush charter passengers come from all walks of life, and not all are frequent airline passengers who are likely to be educated on dangerous goods issues. Some are therefore quite likely to be carrying items in their baggage that can cause you trouble; and which you need to know about. Magnets come in many disguises, being components in everything from portable radios to laptop computers. The possibility that you have an uninvited magnetic device aboard should always be considered.

Another issue is that when the magnet began affecting the compass, there would have been a large and quite sudden discrepancy between the magnetic compass and the directional gyro. When that happens it is not a good idea to assume automatically that the DG is precessing. It may be, as in this case, that the compass itself is giving an inaccurate reading because of magnetic interference.

A risk management practice that many experienced bush charter pilots use is to never leave cruising altitude until they have either positively identified their destination or obtained a definite on-track fix. Apart from the reduced view with reduced altitude, flight at unnecessarily low level often exposes you to the possibility that your destination and other landmarks are obscured by surrounding higher ground.

Magnets are not the only source of the unexpected; some recorded events are way outside anything the dangerous goods



Juanita Franzl

Gone haywire: The possibility that you have a magnetic device aboard should always be considered.

manuals cover. You need to adopt a cautious approach and a super-conservative attitude to anything that comes aboard your aeroplane.

Dangerous goods: A quick ring-around to several experienced GA pilots produced many and varied dangerous goods incidents including the following:

- A glass bottle of mercury brought aboard by a geologist broke against the passenger's digging pick and leaked into the nose baggage compartment of a Cessna 402. When metallic mercury contacts aluminium alloys as in this case, rapid corrosion can develop, and is extremely difficult to arrest. The spillage went undiscovered for four days and repairs to primary structures and radio equipment cost several thousand dollars. The company also lost business while the aircraft was being repaired.
- Turbulence encountered on a charter flight carrying two veterinarians, who customarily carry their equipment and medications in plastic buckets, resulted in one bucket tipping over and scattering bottles – some of which broke – around

the rear locker of a Cessna 310. Of the two glass bottles, which were fortunately unbroken, one contained Condy's crystals and the other glycerine. Mixed together, these two chemicals can form a powerful incendiary.

- Two "sightseers" chartered an aeroplane with a door removed, ostensibly to photograph some Victorian alpine scenery. Incredibly, they had with them twenty phials containing sticks of phosphorus immersed in water. Their plan was to do some illegal burning off of alpine grazing country, by dropping the phials so that when they broke, the phosphorus would contact the atmosphere and ignite. Fortunately the pilot noticed some of their preparations, quizzed them, and cancelled the operation before it got off the ground.
- A strong smell of LPG was noted aboard a Cessna 404 returning scuba divers from a camping holiday on a Great Barrier Reef island. A precautionary landing was made at an en route airport. The valve on an almost full 9 kg gas bottle, which the passenger had claimed was an empty compressed air bottle, had vibrated open and discharged its contents into the baggage compartment, which was also found to contain fireworks, battery acid, and two plastic bags of illegally captured tropical fish, swimming in highly corrosive sea water.
- Finally, why does it take two muscular young mine workers to load a 15 kg toolbox into your nose locker? Answer – because somebody has dropped a significant decimal point, and in fact the box weighs almost as much as two mine workers. Such issues must be identified and corrected long before attempting to rotate on a short airfield. Healthy and imaginative risk-awareness (innate suspicion) will extend the life expectancy of all bush pilots and their passengers.